agri-fax Alberta

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Varietal Description of Tankard Six-Row Spring Barley

Origin and breeding

Tankard was developed by the University of Saskatchewan, Saskatoon, Saskatchewan. This variety was developed from the cross Argyle x Minnesota M34 and it was assigned the test number SM83166 in 1983.

Varietal characteristics

Plant characteristics

Juvenile growth habit: erect

Coleoptile color: green

Leaves: medium green; medium length and width; glabrous sheath and blade

Flag leaf: medium green; medium length and width; intermediate attitude; waxy sheath; white auricles

Stem: bluish green with a waxy bloom; medium thickness; 5 nodes; slightly curved neck; stem exsertion of 3-10 cm; v-shaped collar

Heading: mid-season; 1-2 days later than Bonanza

Plant height: tall; same as Bonanza

Maturity: 1-2 days later than Bonanza

Shattering resistance: fair

Resistance to neck breaking: good

Resistance to straw breaking: good

Tolerance to drought: fair

Disease reaction: moderately resistant to root rot, leaf spot and head blight (*Helminthosporium sativum*), net blotch (*Helminthosporium teres*) and stem rust (*Puccinia graminis*); susceptible to loose smut (*Ustilago nuda*), covered smut (*Ustilago hordei*), black semi-loose smut (*Ustilago nigra*), powdery mildew (*Erysiphe graminis*), stripe (*Helminthosporium gramineum*), scald (*Rhynchosporium secalis*); Septoria leaf blotch (*S. passerinii*); ergot (Claviceps purpurea); bacterial blight (*Xanthomonas translucens*); barley yellow dwarf virus (BYDV) and false stripe virus.

Spike characteristics

Type: six-row

Shape: tapering; dense; medium length; no overlap of lateral kernels

Attitude: semi-nodding

Lemma awns: semi-smooth; long; purple tip

Glumes: half the length of the lemma; short hairs restricted to the middle of the glume

Glume awns: longer than the glumes; rough, purple tip

Rachis: slightly tapered segments; awned internode; numerous short hairs

Kernel characteristics

Size: medium length and width

Aleurone: blue

Rachilla: medium length; long hairs; few abnormal rachillas

Lateral veins: green with few barbs

Basal marking: transverse crease

Hulls: wrinkled lemma and palea

Quality: very good

Protein content: intermediate

Performance

Adapted to Western Canada, Tankard is a six-row malting barley with very promising quality. It has higher extract:diastatic power and alpha amylase activity than Bonanza and a better soluble:total protein ratio. It has outyielded Bonanza and Argyle in all zones in each of three years of testing. It is similar to Bonanza in lodging resistance and height, is 1-2 days later maturing, has a slightly lower 1000 kernel weight and slightly higher test weight than Bonanza. It has disease reactions similar to Argyle and Bonanza.

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.

Maintenance of breeder seed

Department of Crop Science and Plant Ecology,
University of Saskatchewan

Canadian Distributor

SeCan Association

Recommended by

Western Canada Barley and Oat Registration
Recommending Committee

Table 1. Yield (100's of kg/ha) of Tankard and check varieties, Western Co-operative Six-Row Barley Test by Soil zone, 1985-1987

Variety	Black		Brown		Black & Grey		Peace River	
	(11)*	(15)	(10)	(16)	(11)	(13)	(3)	(4)
Tankard	49.7	55.3	53.5	51.8	53.3	54.9	50.3	46.4
Bonanza	46.7	48.1	50.4	49.1	50.6	50.5	46.7	43.4
Argyle**	48.4	—	50.6	—	50.8	—	47.0	—

* No. of station-years of data
** 1986-87 only

Table 2. Agronomic characteristics of Tankard and check varieties, Western Co-operative Six-Row Barley Tests, 1985-87

Variety	Lodging (1-9)*		Height (cm)		Maturity (days)		1000 kernel wt. (g)		Test weight (kg/hl)	
Tankard	3.4	3.2	90.1	90.1	93.1	94.9	35.4	36.6	62.0	62.0
Bonanza	3.7	3.4	91.1	90.4	91.8	92.6	36.4	37.2	60.1	60.3
Argyle**	3.1	—	92.3	—	92.5	—	34.8	—	60.0	—

* 1-9; 1 = best
** 1986-87 only

Table 3. Quality characteristics of Tankard and check varieties, Western Co-operative Six-Row Barley Tests, 1985-87

Variety	Plump (%)	Protein (%)	F. Ext. (%)	70° C Ext. (%)	F/70° C (%)	Soluble Protein (%)	S/T (%)	Diast. Power	α-amylase (D.U.)
Tankard	89.3	12.9	77.9	75.0	2.9	5.37	43.6	186	55.1
Bonanza	89.4	13.9	75.9	73.3	2.6	5.24	39.5	158	53.2

Table 4. Disease reactions of Tankard and check varieties, Western Co-operative Six-Row Barley Tests, 1986-87

Variety	Stem Rust (%)	Net Blotch*			Common Root Rot (%)		Smuts (%)		
		102	858	857**	Sask.	Scott	nuda	hordei	negra
Tankard	35	9.5	9	6	41	21	63	14	11
Bonanza	45	10.0	9	7	43	20	54	10	7
Argyle	35	10.0	9	5	36	13	40	25	13

* 1-10; 1 = best
** Race

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